

WHAT IS CLAIMED IS:

1. A television receiving apparatus capable of receiving signals of a desired frequency in correspondence to a first channel plan having predetermined channel frequencies assigned, and a second channel plan containing the channel frequencies assigned to said first channel plan and having other channel frequencies assigned in the frequency bands not assigned to said first channel plan,

said television receiving apparatus comprising:

station presence judging means for judging whether a broadcasting station is present or not at a channel frequency assigned to each channel plan by searching all or part of the frequency bands contained in said first channel plan or said second channel plan;

first channel number counting means for judging whether or not the channel frequency of a broadcasting station is within a fixed frequency range from a center frequency, if said station presence judging means judges the presence of said broadcasting station, and counting up the number of station present channels in the channel plan to which said broadcasting station belongs, if the channel frequency of the broadcasting station is within the fixed frequency range from the center frequency, for all the broadcasting stations which are judged to be present;

second channel number counting means for memorizing the error data off a center frequency together with the channel

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number, if it is determined by said first channel number counting means that the channel frequency of a station is outside a fixed frequency range from the center frequency, for all the stations that are judged to be present, and making a
5 comparison between the error data and the error data to determine whether or not a difference between the error data and the error data is within the fixed frequency range, classifies the error data in accordance with the difference between the error data and the error data, and further adds and
10 counts up the number of error data contained within the largest group to the station present channel number of said second channel plan;

comparison means for comparing the counted channel number for said first channel plan counted by said first channel number
15 counting means and the counted channel number for said second channel plan counted by said second channel number counting means;

first discriminating means for discriminating whether or not there is a continuous channel among the channels which are
20 judged that station is present, if the count number for said first channel plan is smaller than the count number for said second channel plan, as a result of comparison by said comparing means;

second discriminating means for discriminating whether
25 or not there is a continuous channel among the channels of the

error data counted by said second channel number counting means,
if it is determined that there is no continuous channel, as a
result of discrimination by said first discriminating means;
and

5 channel plan discriminating means for discriminating
whether said television receiving apparatus is a first channel
plan mode or a second channel plan mode, based on a result of
comparison by said comparison means, a result of discrimination
by said first discriminating means, and a result of
10 discrimination by said second discriminating means.

2. The television receiving apparatus according to claim 1,
wherein

15 said second channel number counting means stores the
error data off a center frequency along with its channel number
in a memory, if it is determined that the channel frequency of
a station that is judged to be present is outside a fixed
frequency range from the center frequency, for all the stations
which are judged that station is present in the second channel
20 plan, wherein the error data first stored in said memory is set
as the reference error data, the error data stored subsequently
is set as the comparative error data, and the comparative error
data is compared in succession with the reference error data
in such a way that

25 if the comparative error data is within the fixed

frequency range from the reference error data, the comparative error data is judged to be contained within the same group as the reference error data, and the coincidence number is counted up as being contained within the same group as the reference error data, or

if the comparative error data is outside the fixed frequency range from the reference error data, a check is made whether or not the next reference error data has been already registered, and the comparative error data is registered as the next reference error data, when the next reference error data has not been registered, until the comparison for all the error data is completed, in which the coincidence number is counted up for one group, and then the next reference error data registered ahead and the error data stored subsequently as the comparative error data are compared in the same way as previously, the coincident number is counted up for another one group until there is no next reference error data registered, and wherein

the coincident number for the largest group among the thus obtained groups is added and counted up to the number of station present channels for said second channel plan.

3. ~~The television receiving apparatus according to claim 1 or 2, wherein~~

~~said fixed frequency range is approximately $\pm 200\text{kHz}$.~~

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4. The television receiving apparatus according to claim 1,
2 or 3, wherein

5 said channel plan discriminating means discriminates a
first channel plan mode in the case where the count number for
said first channel plan is greater than or equal to the count
number for said second channel plan as a result of comparison
by said comparing means, or

10 in the case where the count number for said first channel
plan is smaller than the count number for said second channel
plan,

said channel plan discriminating means discriminates a
second channel plan mode,

15 if there is a continuous channel among the channels
of the error data counted by said second channel number counting
means as a result of discrimination by said first discriminating
means, or

20 if there is no continuous channel as a result of
discrimination by said first discriminating means, and if there
is a continuous channel as a result of discrimination by said
second discriminating means, or

said channel plan discriminating means discriminates a
first channel plan mode,

if there is no continuous mode at all.

5. The television receiving apparatus according to claim 1,
2, 3 or 4, wherein
said first channel plan is ground wave broadcasting, and
said second channel plan is cable television
5 broadcasting.

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